

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A composition which comprises a compound of the formula (I)

A-L-B (I)

in which

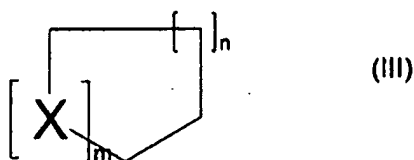
- A is a monomer of TKPPR_x or
a monomer of a TKPPR analogue which contains TKPPR
and which specifically binds to NP-1 or cells that express
NP-1 with avidity that is equal to or greater than TKPPR;
- L is a linker; and
- B is a phospholipid.

Claims 2-22 (Canceled)

23. (Original) A composition according to claim 1, in which L is a bond or is derived from:
an alkyl chain C₁.C₆₀₀₀, linear or branched, saturated or unsaturated, optionally interrupted or
substituted by one or more groups such as: O, S, NR, OR, SR, COR, COOH, COOR, CONHR,
CSNHR, C=O, S=O, S(=O)₂, P=O(O)₂OR, P(O)₂(OR)₂, halogens, or phenyl groups, optionally
substituted by one or more -NHR, -OR, -SR, -COR, -CONHR, -N-C=S, -N-C=O, halogens, in
which R is H or an alkyl group C₁-C₄, linear or branched, optionally substituted by one or more
— OH; such a chain can be interrupted or substituted by one or more cyclic groups C₃-C₉,

saturated or unsaturated, optionally interrupted by one or more O, S or NR; by one or more groups such as: -NHR, -OR, -SR, -COR, -CONHR, or a phenyl group optionally substituted by one or more -NHR, -OR, -SR, -COR, -CONHR, -N-C=S, -N-C=O, halogens.

24. (Original) A composition according to claim 23, in which the cyclic groups present in L are saturated or unsaturated, and correspond to the following general formula (III)



in which

n can range from 0 to 4;

m can range from 0 to 2;

X can be NH, NR, O, S or SR.

25. (Original) A composition according to claim 23, in which the linker L is an oligopeptide comprising 1 to 100 natural or synthetic amino acids.

26. (Original) A composition according to claim 25, in which the amino acids are selected from the group consisting of glycine, glutamic acid, aspartic acid, γ -amino-butyric acid and trans-4-aminomethyl-cyclohexane carboxylic acid.

27. (Original) A composition according to claim 23, in which L is derived from difunctional PEG(polyethyleneglycol) derivatives.

28. (Original) A composition according to claim 23, in which L is selected from the group consisting of: glutaric acid, succinic acid, malonic acid, oxalic acid and PEG derivatized with two CH_2CO groups.

29. (Currently amended) A compound of the formula (IIa)

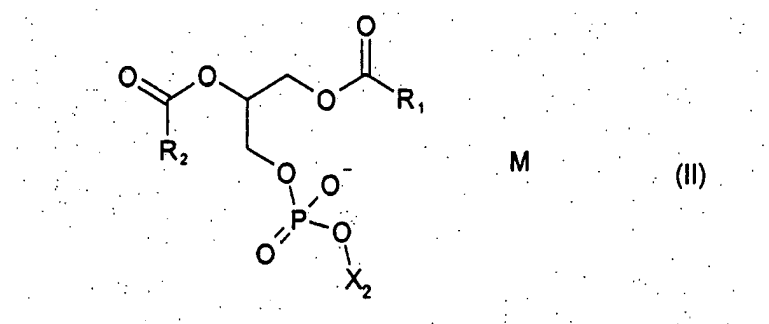


in which

A is a monomer of TKPPR_2 or
a monomer of a TKPPR analogue which contains TKPPR
and which specifically binds to NP-1 or cells that express
NP-1 with avidity that is equal to or greater than TKPPR;

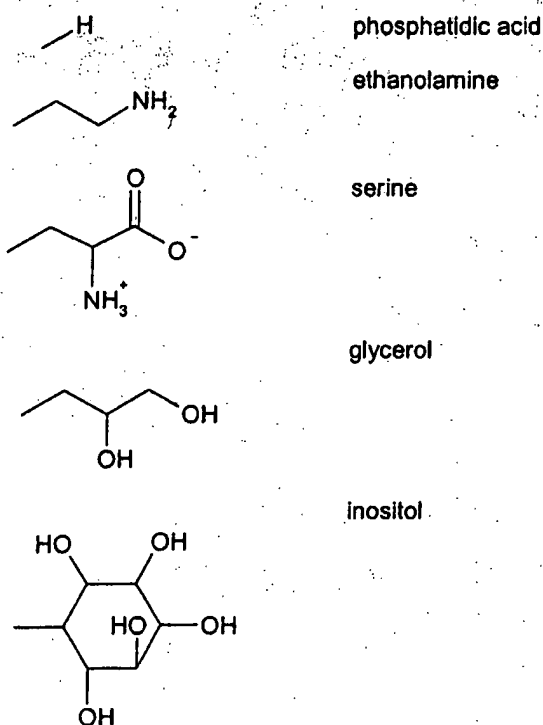
L is a linker; and

B_{1a} comprises a phospholipid moiety of the formula (II),



where

M is an alkaline or alkaline- earth metal cation;
R₁ and R₂ independently, correspond to a linear long chain
C₁₂-C₂₀, saturated or unsaturated, optionally interrupted by C=O, or
O; and
X₂ is selected from the group consisting of



30. (Original) A compound according to claim 29, in which R₁ and R₂ are independently a saturated linear long chain C₁₂-C₂₀.

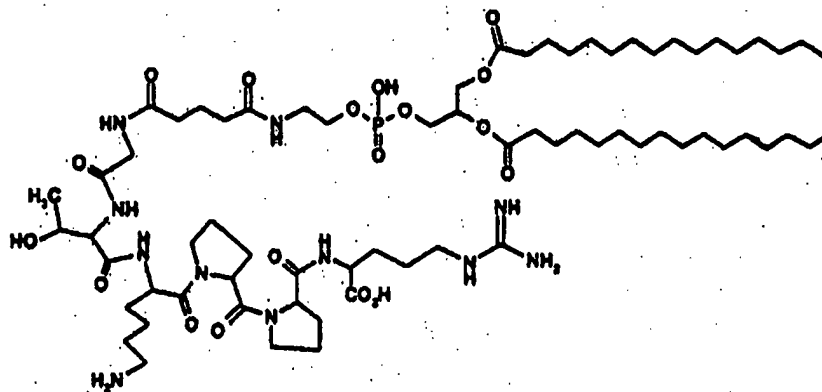
31. (Original) A compound according to claim 30, in which the phospholipid of formula (II) comprises a phospholipid selected from the group consisting of:

dimyristoylphosphatidylethanolamine, dipalmitoylphosphatidylethanolamine,

distearoylphosphatidylethanolamine, diarachidoylphosphatidylethanolamine, dioleoylphosphatidylethanolamine, dilinoleylphosphatidylethanolamine, fluorinated analogues of any of the foregoing, and mixtures of any of the foregoing.

32. (Original) A compound according to claim 31, in which the phospholipid of formula (II) comprises dipalmitoylphosphatidylethanolamine.

33. (Previously presented) A composition comprising the following compound:



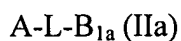
34. (Original) An ultrasound contrast agent comprising a suspension of gas-filled microbubbles, in which the microbubbles comprise a compound of any one of claims 29 to 32.

35. (Original) An ultrasound contrast agent comprising a suspension of gas-filled microbubbles, in which the microbubbles comprise a compound of claim 29 and the gas comprises a fluorinated gas.

36. (Previously presented) An ultrasound contrast agent comprising a suspension of gas-filled microbubbles in which the microbubbles comprise a compound of claim 29 in which A is TKPPR monomer and the gas comprises SF₆, or a perfluorocarbon selected from the group consisting of C₃F₈, C₄F₈, C₄F₁₀, C₅F₁₂, C₆F₁₂, C₇F₁₄ and C₈F₁₈.

Claims 37-48 (Canceled)

49. (Previously Presented) A method of ultrasound imaging comprising administering an ultrasound contrast agent comprising a suspension of gas-filled microbubbles, in which the microbubbles comprise a compound of the formula (IIa)

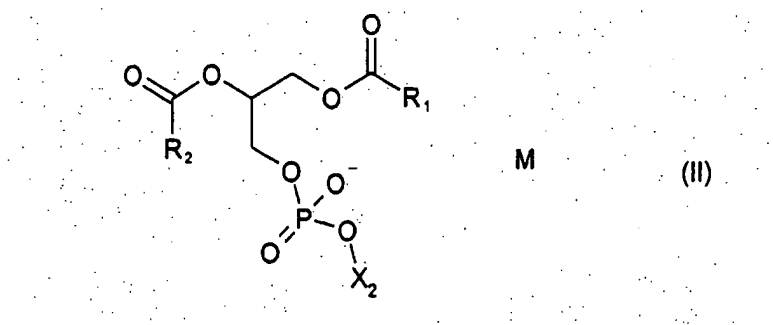


in which

A is a monomer of TKPPR₂ or
a monomer of a TKPPR analogue which contains TKPPR
and which specifically binds to NP-1 or cells that express
NP-1 with avidity that is equal to or greater than TKPPR;

L is a linker; and

B_{1a} comprises a phospholipid moiety of the formula (II),

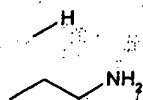


where

M is an alkaline or alkaline-earth metal cation;

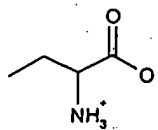
R₁ and R₂ independently, correspond to a linear long chain
C₁₂-C₂₀, saturated or unsaturated, optionally interrupted by C=O, or
O; and

X₂ is selected from the group consisting of

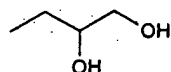


phosphatidic acid

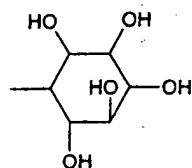
ethanolamine



serine



glycerol



inositol

Claims 50-65 (Canceled)